

## APPENDIX C

### QUARANTINE STUDY PROTOCOLS

#### Based upon the Bison Quarantine Protocols from final Bison Translocation EA (2010)

Organization will maintain the translocated bison in one or more fenced pastures, approved by Federal and State animal health officials, on site until December 2016. During winter and spring, bison will be observed daily for abortions. Any aborted fetuses will be reported immediately to investigators and submitted to the state veterinary diagnostic laboratory for an abortion work-up and *Brucella* culture. In fall of 2012, all bison (cows, yearlings, and calves) will be worked through a chute and blood samples collected by APHIS for brucellosis serology testing. If animals are negative on serology, fences can be removed and the animals allowed to range.

Serologic tests will include the following: fluorescence polarization assay, standard card, standard tube, standard plate, complement fixation, rivanol, and BAP A. Interpretation of tests will be done by the designated brucellosis epidemiologist and the regional epidemiologist. Assuming an approximate 50% male/50% female calf crop each year and assuming that the slight majority of females will first breed as two-year-olds to calve as 3- year olds and that animals will calve every year thereafter, it is anticipated that all bison will be tested each year and the maximum population in the following 4 years will be 240.

As part of the requirements of the project to ensure that latent infection is not present in the translocated bison, it is necessary to monitor the population for 5 years following translocation. During the first year (2012), every animal will be serologically tested by APHIS as described above. Thereafter, a percentage of adult or adolescent bison will be tested by APHIS. Using a calculation to determine a 5% or greater prevalence with 95% confidence, approximately 50% of the bison will need to be tested each year as the population grows. Animal capture can be accomplished by setting up a trap and working them through a chute or by chemical immobilization delivered by dart, or by helicopter capture or a combination of techniques.

Should serologically positive animals be detected in 2012 or subsequent years, the positives will be sacrificed, necropsied, and specimens collected for culture. If brucellosis infection is confirmed, whole-herd testing will be necessary. With results of the whole herd test, a disease management plan will be developed in cooperation with the State Veterinarian's office and APHIS epidemiologists. Depending on testing results, the disease management plan may consist of vaccination and rigorous test and slaughter, to whole herd depopulation.

It is anticipated that if the translocated herds remain seronegative for 5 years following quarantine, continued regular monitoring would not be required as a condition of the Quarantine Feasibility Study.

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